National Aeronautics and Space Administration

FINAL TECHNICAL REPORT FOR NAG 5-3891

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Final Technical Report for NAG 5-3891

Long-Term Hard X-Ray Monitoring of X-Ray Bursters

The scientific goal of this project was to monitor a selected sample of x-ray bursters using data from the Burst and Transient Source Experiment (BATSE) on the Compton Gamma-Ray Observatory to characterize the hard x-ray emission of these objects over long time intervals. The project was closely related to "Monitoring x-ray emission from x-ray bursters", NASA project NAG5-3595, and "Hard x-ray emission of x-ray bursters", NASA project NAG5-4633, and shares publications in common with both of these. These efforts have lead to results directly from the BATSE data and also from Target of Opportunity Observations (TOO) made with the Rossi X-Ray Timing Explorer based on detection of transient hard x-ray outbursts with BATSE. The following papers have used BATSE data or data obtained with BATSE TOO triggers.

Publications:

"Correlation between Fast Quasi-Periodic Oscillations and X-Ray Spectral Shape in Atoll Sources", P. Kaaret, W. Yu, E.C. Ford, and S.N. Zhang, Astrophys. J. Letters 497, L93 (1998).

"Discovery of Kilohertz QPOs in the Atoll X-Ray Binary 4U 1705-44", E.C. Ford, M. van der Klis, and P. Kaaret, Astrophys. J. Letters 498, L41 (1998).

"Measurement of Hard Lags and Coherences in the X-Ray Flux of Accreting Neutron Stars and Comparison with Accreting Black Holes ", E.C. Ford, M. van der Klis, M. Mendez, J. van Paradijs, and P. Kaaret, Astrophys. J. Letters 512, L31 (1999).